LPDES PERMIT NO. LA0042731 (Agency Interest No. 2889)

LPDES FACT SHEET and RATIONALE
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

I. Company/Facility Name: Entergy Operations, Inc.
River Bend Station
5485 U.S. Highway 61
St. Francisville, Louisiana 70775

II. Issuing Office: Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
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Date Prepared: April 25, 2005

IV. Permit Action/Status:

A. Reason For Permit Action:

Proposed first time issuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2365/40 CFR 122.46*.

* In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401-402, and 404-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC Chapter 11) will not have dual references.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

A. NPDES permit: Effective Date - November 1, 1999
Expiration Date - October 31, 2004
EPA has not retained enforcement authority

B. LPDES application received on May 4, 2004, supplemental information received via email on August 10, 2005.

V. Facility Information:

A. Location - 5485 U.S. Highway 61, St. Francisville, Louisiana, West Feliciana Parish (Latitude 30°46'01", Longitude 91°19'51")

B. Applicant Activity -

According to the application, Entergy Operations, River Bend Station is an existing nuclear fueled steam electric generating facility with a net generating capacity of 966 megawatts electric (MWe).

The primary fuel source for the plant is enriched Uranium-235. This Office does not regulate radioactive materials in water discharge permits. Jurisdiction for regulation of these materials is held by the Nuclear Regulatory Commission (NRC) under the Atomic Energy Act, 42 U.S.C. 2021, et seq. Therefore, the permittee must comply with radiation standards established and regulated by the NRC. This LPDES permit renewal does not address radiation standards.

The primary discharge from the facility consists of cooling tower blowdown. The electric plant withdraws cooling water from a single intake structure on the Mississippi River. At the site, there are four eight-cell induced draft cooling towers that recirculate water that is pumped through the turbine condenser and service water heat exchangers, then the heated water is returned to the cooling towers. Water is lost in the process due to evaporation and drift, and is replenished with clarified river water.

C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401-402, and 404-471 have been adopted by reference at LAC 33:IX.4903)

Guideline	Reference
Steam Electric Power Generating	40 CFR 423

Other sources of technology based limits:

- Best Professional Judgement
- LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6)
- LDEQ Sanitary General Permits
- Exterior Vehicle Wash Wastewater General Permit (LAG750000)

D. Fee Rate -
1. Fee Rating Facility Type: Major
2. Complexity Type: V
3. Wastewater Type: III
4. SIC code: 4911

E. Facility Effluent Flow - 4.655 MGD (Continuous max 30-day flow from Final Outfall 001)

VI. Receiving Waters:

Mississippi River

A. TSS (15%), mg/L: 50.8
B. Average Hardness, mg/L $CaCO_3$: 154
C. Critical Flow, cfs: 141,955
D. Mixing Zone Fraction: 1/3
E. Harmonic Mean Flow, cfs: 366,748
F. River Basin: Mississippi River, Segment No.: 070201
G. Designated Uses:
primary contact recreation, secondary contact recreation, fish and wildlife propagation and drinking water supply

Information based on the following: Office of Technologies recommendations per memo dated April 25, 2005, Water Quality Management Plan, Volume 5A, 1994; LAC 33:IX Chapter 11; Hardness and 15% TSS data come from LDEQ Ambient Monitoring Station #318 on the Mississippi River at the LA 10 ferry landing in St. Francisville, listed in Hardness and TSS Data for All LDEQ Ambient Stations for the Period of Record as of March 1998, LeBlanc

VII. Outfall Information:

Outfall 001

A. Type of wastewater - The continuous discharge of cooling tower blowdown, and previously monitored Internal Outfalls 101, 201, 301, 401, 501 and 601

B. Location - At the exposed vacuum-break chamber of the buried 30-inch diameter discharge pipeline prior to discharge to the Mississippi River at Latitude 30°43'43" and Longitude 91°19'46". As an alternative, the permittee may report temperature measurements based on the balance of plant computer points, and flow may be measured from the auxiliary control room flow recorder.

C. Treatment - dechlorination and neutralization (when needed)

D. Flow - Continuous, 4.655 MGD

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Effluent Data - See Appendix C

Internal Outfall 101

A. Type of wastewater - The intermittent discharge of low level radioactive low volume wastewater from the the liquid radwaste wastewater system (LWS) which includes equipment and building floor drain sumps, equipment washing, personnel decontamination, laboratory drains, filter press effluent, other low volume wastewater sources as defined in 40 CFR 423 and maintenance wastewaters.

B. Location - at the point of discharge from the Radwaste building prior to combining with other wastestreams and the waters of Final Outfall 001 (Latitude 30°45'21", Longitude 91°19'46").

C. Treatment - flocculation, mixed bed resins, reverse osmosis, mixing, multimedia filtration, screening, carbon adsorption, coagulation, ion exchange, and neutralization when required

D. Flow - Intermittent, <0.016 MGD (Max 30-Day Flow)

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Application Effluent Data - (See Appendix C)

Internal Outfall 201

A. Type of wastewater - Treated sanitary wastewater; also, during maintenance activities, sanitary wastewater may be combined with wastewater from floor drains of the control building and the diesel generator oil/water separator (and other low volume wastewaters as defined in 40 CFR 423) and may be routed to Outfall 002

B. Location - At the point of discharge from the sewage treatment plant prior to combining with other wastewaters and the waters of Final Outfall 001. (Latitude 30°45'04", Longitude 91°19'45").

C. Treatment - Mixing, screening, sedimentation (settling), slow sand filtration (if required), disinfection (UV light), activated sludge, and aerated lagoons

D. Flow - Intermittent, 0.130 MGD (Max 30-Day Flow)

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Application Effluent Data - (See Appendix C)

Internal Outfall 301

A. Type of wastewater - Mobile metal cleaning wastewater generated from cleaning processes of internal components of plant equipment

B. Location - at the point of discharge of metal cleaning wastewater prior to combining with other waters and the waters of Final Outfall 001 (from various locations on the property).

C. Treatment - Flocculation, mixing, screening, sedimentation (settling), carbon adsorption, chemical precipitation, coagulation, ion exchange, and neutralization

D. Flow - 0.1 MGD (Max 30-Day Flow when discharging)

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Application Effluent Data - No application data was provided for this outfall because the only discharge from the outfall since the facility became operational occurred during a 3-month period in 1992.

Internal Outfall 401

A. Type of wastewater - The intermittent internal discharge of low volume wastewater treatment systems to Final Outfall 001 via the common header. The low volume waste management systems receive effluent from the following sources, including but not limited to: ion exchange resin backwash and regeneration, auxiliary boiler blowdown, floor washdown, equipment washing, personnel decontamination, laboratory drains, filter press effluent, and maintenance wastewaters and other low volume wastewater sources as defined in 40 CFR 423. During maintenance activities, Internal Outfall 401 may be discharged via the cooling tower flume rather than the common discharge header. During maintenance activities, reverse osmosis reject water from the makeup

water polishing system may be discharged via Outfall 401 rather than Outfall 003.

B. Location - at the makeup water pump house off one of two discharge pumps, after filtration prior to combining with other wastestreams and the waters of Final Outfall 001 (Latitude 30°45'21", Longitude 91°19'46").

C. Treatment - Flocculation, multimedia filtration, screening, coagulation, ion exchange, and neutralization when required

D. Flow - Intermittent, <0.016 MGD (Max 30-Day Flow)

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Application Effluent Data - No application data was provided specifically for this Outfall. The wastewaters from this new internal outfall are currently permitted under Internal Outfall 101.

Internal Outfall 501

A. Type of wastewater - The intermittent discharge of low volume wastewater including but not limited to wastewaters from the mobile standby service water reverse osmosis filtration unit and standby cooling tower reject.

B. Location - at the northwest end of the flume at the point of discharge of low volume wastewater prior to combining with other wastestreams and the waters of Final Outfall 001 (Latitude 30°45'21", Longitude 91°19'46").

C. Treatment - screening and reverse osmosis if needed

D. Flow - Intermittent, <0.016 MGD (Max 30-Day Flow)

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Application Effluent Data - No application data was provided specifically for this Outfall. The wastewaters from this new internal outfall are currently permitted under Internal Outfall 101.

Internal Outfall 601

A. Type of wastewater - The intermittent discharge of low volume wastewater including but not limited to wastewaters from filter backwash from service water

polishing and feed-and-bleed from the service water system. This system is not normally hooked up and would be for special projects.

B. Location - at the southeast end of the flume at the point of discharge of low volume wastewater prior to combining with other wastestreams and the waters of Final Outfall 001 (Latitude 30°45'21", Longitude 91°19'46").

C. Treatment - reverse osmosis

D. Flow - Intermittent, <0.016 MGD (Max 30-Day Flow)

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Application Effluent Data - No application data was provided specifically for this Outfall. The wastewaters from this new internal outfall are currently permitted under Internal Outfall 101.

Outfall 002

A. Type of wastewater - Stormwater runoff from the industrial materials storage area, low-level storage building and sewage treatment plant area; air conditioning condensate; potable water. During periods of maintenance activities, treated wastewater including maintenance wastewaters and low volume wastewaters (as defined by 40 CFR 423)(from Internal Outfall 201) may be discharged through Outfall 002.

B. Location - At the point of discharge from the plant drainage ditch system where the stormwater runoff from the sewage treatment plant area converges with that from the industrial materials storage area and the Low Level Waste Storage Building (Latitude 30°45'13", Longitude 91°19'37")

C. Treatment - None

D. Flow - Intermittent, 0.730 MGD (Max 30-Day Flow)

E. Receiving waters - Plant drainage ditch system thence to Grant's Bayou thence to Alligator Bayou thence to Thompson Creek, thence to the Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Application Effluent Data - (See Appendix C)

Outfall 003

A. Type of wastewater -Stormwater runoff from the reactor building, turbine building, services building, clarifiers, main transformer yard and auxiliary transformer yard; maintenance wastewaters including but not limited to hydrostatic test water and flushing of piping systems and vessels (including fire protection water supply system and automatic sprinkler system) and reverse osmosis reject water from standby service water polishing system; low volume wastewaters including but not limited to effluent from floor drains within power plant buildings (domestic potable water, well water, reject mobile reverse osmosis and fire suppression water treated in the fire pump house oil/water separator), air compressor condensate; reverse osmosis reject water from makeup water polishing system; air conditioning condensate and de minimis quantities of cooling tower drift/mist.

B. Location - At the point of discharge from the plant drainage ditch system along the East Creek prior to combining with the waters of Grant's Bayou (Latitude 30°45'25", Longitude 91°19'42")

C. Treatment - Stormwater from main transformer yard and auxiliary transformer yard and fire suppression water treated by screening. Domestic potable water, well water, reject mobile reverse osmosis and fire suppression water treated in the fire pump house oil/water separator

D. Flow - Intermittent, 5.413 MGD (Max 30-Day Flow)

E. Receiving waters - Plant drainage ditch system thence to Grant's Bayou thence to Alligator Bayou thence to Thompson Creek, thence to the Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Application Effluent Data - (See Appendix C)

Outfall 004

A. Type of wastewater - Stormwater runoff from the office areas, warehouse areas, materials storage areas and equipment/vehicle maintenance areas; maintenance wastewaters including but not limited to hydrostatic testing and flushing of piping systems and vessels (i.e. fire protection water supply system and automatic sprinkler system); air conditioning condensate; and previously monitored effluent from Internal Outfall 104.

B. Location - At the point of discharge from the plant drainage ditch system along the West Creek prior to combining with the waters of Grant's Bayou (Latitude 30°44'59", Longitude 91°19'47")

C. Treatment - Fire protection water supply system water treated by screening

D. Flow - Intermittent, 5.846 MGD (Max 30-Day Flow)

E. Receiving waters - Plant drainage ditch system thence to Grant's Bayou thence to Alligator Bayou thence to Thompson Creek, thence to the Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Application Effluent Data - (See Appendix C)

Outfall 104

A. Type of wastewater - Exterior vehicle washwater

B. Location - At the point of discharge from the area where vehicles will be washed (From various locations on the property)

C. Treatment - None

D. Flow - Intermittent, 0.0004 MGD (Max 30-Day Flow)

E. Receiving waters - Plant drainage ditch system thence to Grant's Bayou thence to Alligator Bayou thence to Thompson Creek, thence to the Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Application Effluent Data - There has been no discharge from this outfall since it was initially established in the November 1, 1999 LPDES permit. Therefore, no effluent data was submitted with the May 4, 2004 permit application

Outfall 005

A. Type of wastewater - Stormwater runoff from the cooling tower yard, air conditioning condensate, and de minimis quantities of cooling tower drift/mist.

B. Location - At the point of discharge from the plant drainage ditch system east of the cooling towers and prior to combining with other waters (Latitude 30°45'34", Longitude 91°19'41")

C. Treatment - None

D. Flow - Intermittent, 0.988 MGD (Max 30-Day Flow)

E. Receiving waters - Plant drainage ditch system thence to Grant's Bayou thence to Alligator Bayou thence to Thompson Creek, thence to the Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Application Effluent Data - (See Appendix C)

Outfall 006

A. Type of wastewater - Clarifier underflow

B. Location - at the point of discharge of clarifier underflow prior to combining with other waters.

C. Treatment - None

D. Flow - 0.864 MGD (Max 30-Day Flow)

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070201

G. Application Effluent Data - No application data was provided for this outfall because the previous permit did not require monitoring for this wastewater.

VIII. Proposed Permit Limits and Rationale:

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. CHANGES FROM THE PREVIOUS PERMIT

1. Outfall 001 - The flow reported for Outfall 001 in the May 4, 2004 LPDES application, is 26.4% higher than the flow from which the November 1999 LPDES permit's Free Available Chlorine mass limitations were based. Therefore, the mass limitations in the draft renewal permit have been increased by 26.4% due to the increased flow.

2. Outfall 006 - In Part II, Paragraph Q of the previous permit, the discharge of clarifier blowdown was authorized. The renewal permit has established an Outfall in Part I of the permit for this clarifier blowdown discharge (Outfall 006) as per current Office practice.

3. Internal Outfalls 401, 501 and 601 - These additional internal outfalls for low volume wastewater have been established in the permit to account for the multiple sources of low volume wastewater that are discharged to Final Outfall 001.

4. Outfalls 002, 003, 004 and 005 - The discharge of air conditioning condensate was added to the list of authorized discharges from these outfalls.

5. Internal Outfall 201 - The discharge of low volume wastewater was added to this outfall.

6. Internal Outfall 104 - The monthly average limitation for COD from the previous permit (200 mg/l) has been removed as per the Exterior Vehicle Wash Wastewater General Permit (LAG750000).

7. Outfall 001 - The draft renewal permit authorizes alternative monitoring locations for temperature and flow.

8. Outfall 002 - The discharge of potable water was added to this outfall.

9. Internal Outfall 201 - pH monitoring, required during periods of maintenance, has been removed from the permit since pH is monitored at the final outfall location (Outfall 002).

10. Outfall 003 - The discharge of cooling tower drift was added to Outfall 003. Additionally, the monitoring frequency for TSS, Oil & Grease, Flow and pH monitoring during periods of low volume wastewater discharge, has been reduced to 1/month.

11. Outfalls 101, 201 (during maintenance activities), 301, 401, 501 and 601 - In accordance with 40 CFR 423, monthly average limitations have been added for TSS and Oil & Grease. Additionally, for Outfall 301, monthly average limitations have been added for copper and iron.

B. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgement) in the absence of guidelines, or on a combination of the two.

The River Bend Power Station is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

Manufacturing Operation	Guideline
Steam Electric Power Generating	40 CFR 423

Proposed effluent limitations and basis of permit limitations are found below:

Outfall 001 - The continuous discharge of cooling tower blowdown and previously monitored Internal Outfalls 101, 201, 301, 401, 501 and 601

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow	Report	Report	Continuous	LAC 33:IX.2707.I.1.b., previous permit
pH	6.0 s.u. (min)	9.0 s.u. (max)	1/week	40 CFR 423.12(b)(1), previous permit
Temperature	105°F	110°F	Continuous	Previous permit
Free Available Chlorine	0.2 mg/l 0.63 lbs/day	0.5 mg/l 1.64 lbs/day	1/week	40 CFR 423.13(d)(1) and previous permits [1]
Total Chromium	0.2 mg/l	0.2 mg/l	1/year [2]	40 CFR 423.13(d)(1) and 40 CFR 423.13(g)
Total Zinc	1.0 mg/l	1.0 mg/l	1/week	40 CFR 423.13(d)(1) and 40 CFR 423.13(g)
Biomonitoring	See Section E (Biomonitoring Requirements) below	See Section E (Bio-monitoring Requirements) below	See Section E (Bio-monitoring Require-ments) below	See Section E (Biomonitoring Requirements) below

(1) In accordance with 40 CFR 122.45(f), mass limitations are applied. Mass loadings for Free Available Chlorine in the previous permit were not based on the conventional concentration to loading calcalation (i.e. mg/l X MGD X 8.34). Therefore, the limitations in the draft renewal permit have not been recalculated using the above calculation because the results would produce limitations significantly higher than the limitations established in the previous permit. Since the permittee is consistently meeting the previous permit's more stringent mass limitations, in accordance with LAC 33:IX.2707.L., the basis for calculating the mass limitations for free available chlorine

has not changed. However, the flow reported for Outfall 001 in the May 4, 2004 LPDES application, is 26.4% higher than the flow from which the November 1999 LPDES permit's Free Available Chlorine mass limitations were based. Therefore, the limitations in the draft renewal permit have been increased by 26.4% due to the increased flow.

(2) The monitoring frequency of 1/year has been established since compounds containing chromium will not be used in the cooling towers.

Internal Outfall 101 - The intermittent discharge of low level radioactive low volume wastewater from the the liquid radwaste wastewater system (LWS) which includes equipment and building floor drain sumps, equipment washing, personnel decontamination, laboratory drains, filter press effluent, other low volume wastewater sources as defined in 40 CFR 423 and maintenance wastewaters.

Internal Outfall 401 -The intermittent internal discharge of low volume wastewater treatment systems to Final Outfall 001 via the common header. The low volume waste management systems receive effluent from the following sources, including but not limited to: ion exchange resin backwash and regeneration, auxiliary boiler blowdown, floor washdown, equipment washing, personnel decontamination, laboratory drains, filter press effluent, and maintenance wastewaters and other low volume wastewater sources as defined in 40 CFR 423. During maintenance activities, Internal Outfall 401 may be discharged via the cooling tower flume rather than the common discharge header. During maintenance activities, reverse osmosis reject water from the makeup water polishing system may be discharged via Outfall 401 rather than Outfall 003.

Internal Outfall 501 -The intermittent discharge of low volume wastewater including but not limited to wastewaters from the mobile standby service water reverse osmosis filtration unit and standby cooling tower reject.

Internal Outfall 601 - The intermittent discharge of low volume wastewater including but not limited to wastewaters from filter backwash from service water polishing and feed-and-bleed from the service water system.

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow	Report	Report	1/month	LAC 33:IX.2707.I.1.b.
Oil & Grease	15 mg/l	20 mg/l	1/month	40 CFR 423.12(b)(3) and 40 CFR 423.12 (b)(11)
TSS	30 mg/l	100 mg/l	1/month	40 CFR 423.12(b)(3) and 40 CFR 423.12(b)(11)

Internal Outfall 201 - Treated sanitary wastewater, floor drains of the control building and the diesel generator oil/water separator (during maintenance activities) and other other low volume wastewaters as defined in 40 CFR 423. During maintenance activities, the treated sanitary and low volume wastewater effluent may be routed to Outfall 002

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Weekly Avg*		
Flow	---	Report	1/6 months	LAC 33:IX.2707.I.1.b.
BOD	---	45 mg/l	1/6 months	LPDES Sanitary General Permits
TSS	---	45 mg/l	1/6 months	LPDES Sanitary General Permits
Fecal Coliform	---	400 colonies/100 ml	1/6 months	LPDES Sanitary General Permits

Internal Outfall 201 - In addition to the above requirements for Internal Outfall 201, the following monitoring and limitations shall be required during maintenance activities [when the discharge is routed to its alternate location (Final Outfall 002)]

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow	Report	Report	1/week	LAC 33:IX.2707.I.1.b.
TSS	30 mg/l	45 mg/l	1/week	BPJ, LPDES Sanitary General Permits
Oil & Grease	15 mg/l	20 mg/l	1/week	40 CFR 423.12(b)(3) and 40 CFR 423.12 (b)(11)

Internal Outfall 301 - Mobile metal cleaning wastewater generated from cleaning processes of internal components of plant equipment

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow	Report	Report	1/week	LAC 33:IX.2707.I.1.b.
TSS	30 mg/l	100 mg/l	1/week	40 CFR 423.12(b)(5) and 40 CFR 423.12(b)(11)
Oil & Grease	15 mg/l	20 mg/l	1/week	40 CFR 423.12(b)(5) and 40 CFR 423.12 (b)(11)
Total Copper	1.0 mg/l	1.0 mg/l	1/week	40 CFR 423.12(b)(5), 40 CFR 423.13(e) and 40 CFR 423.12(b)(11)
Total Iron	1.0 mg/l	1.0 mg/l	1/week	40 CFR 423.12(b)(5), 40 CFR 423.13(e) and 40 CFR 423.12(b)(11)

Outfall 002 - Stormwater runoff from the industrial materials storage area, low-level storage building and sewage treatment plant area; air conditioning condensate; potable water. During periods of maintenance activities, previously monitored treated wastewater (from Internal Outfall 201) may be discharged through Outfall 002.

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow	---	Report	1/quarter	LAC 33:IX.2707.I.1.b.
Oil & Grease	---	15 mg/l	1/quarter	LDEQ Storm Water Guidance [1]
TOC	---	50 mg/l	1/quarter	LDEQ Storm Water Guidance [1]
pH	6.0 s.u. (min)	9.0 s.u. (max)	1/quarter	LDEQ Storm Water Guidance [1]

(1) LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6)

Outfall 003 - Stormwater runoff from the reactor building, turbine building, services building, clarifiers, main transformer yard and auxiliary transformer yard; maintenance wastewaters including but not limited to hydrostatic test water and flushing of piping systems and vessels (including fire protection water supply system and automatic sprinkler system) and reverse osmosis reject water from standby service water polishing system; low volume wastewaters including but not limited to effluent from floor drains within power plant buildings (domestic potable water, well water, reject mobile reverse osmosis and fire suppression water treated in the fire pump house oil/water separator), air compressor condensate; reverse osmosis reject water from makeup water polishing system; air conditioning condensate and de minimis quantities of cooling tower drift/mist.

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow	---	Report	1/quarter (1)	LAC 33:IX.2707.I.1.b.
Oil & Grease	---	15 mg/l	1/quarter (1)	BPJ, LDEQ Storm Water Guidance (2)
TOC	---	50 mg/l	1/quarter	BPJ, LDEQ Storm Water Guidance (2)
TSS	---	100 mg/l	1/month (3)	40 CFR 423.12(b)(3) and 40 CFR 423.12(b)(11)
pH	6.0 s.u. (min)	9.0 s.u. (max)	1/quarter (1)	BPJ, LDEQ Storm Water Guidance (2) and 40 CFR 423.12(b)(1)

(1) Sampling shall be weekly when discharging low volume wastewaters.

(2) LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6)

(3) When discharging low volume wastewater, total suspended solids shall be monitored and reported as required above.

Outfall 004 - Stormwater runoff from the office areas, warehouse areas, materials storage areas and equipment/vehicle maintenance areas; maintenance wastewaters including but not limited to hydrostatic testing and flushing of piping systems and vessels (i.e. fire protection water supply system and automatic sprinkler system); air conditioning condensate; and previously monitored effluent from Internal Outfall 104.

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow	---	Report	1/quarter	LAC 33:IX.2707.I.1.b.
Oil & Grease	---	15 mg/l	1/quarter	BPJ, LDEQ Storm Water Guidance [1]
TOC	---	50 mg/l	1/quarter	BPJ, LDEQ Storm Water Guidance [1]
pH	6.0 s.u. (min)	9.0 s.u. (max)	1/quarter	BPJ, LDEQ Storm Water Guidance [1]

[1] LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6)

Outfall 104 - Exterior vehicle washwater

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow	---	Report	1/quarter	LAC 33:IX.2707.I.1.b.
Oil & Grease	---	15 mg/l	1/quarter	Exterior Vehicle Wash Wastewater General Permit (LAG750000)
COD	---	300 mg/l	1/quarter	Exterior Vehicle Wash Wastewater General Permit (LAG750000)
TSS	---	45 mg/l	1/quarter	Exterior Vehicle Wash Wastewater General Permit (LAG750000)

pH	6.0 s.u. (min)	9.0 s.u. (max)	1/quarter	Exterior Vehicle Wash Wastewater General Permit (LAG750000)
Soaps and/or detergents [1]	Report	---	1/quarter	Exterior Vehicle Wash Wastewater General Permit (LAG750000)

[1] The quantity and types of all soaps and/or detergents used during the sampling period shall be recorded. Records of the quantity and types of soaps and/or detergents shall be retained for three (3) years following Part III.C.3. Additionally, a Material Safety Data Sheet for each material used shall be retained. No DMR reporting shall be required.

Outfall 005 - Stormwater runoff from the cooling tower yard, air conditioning condensate, and de minimis quantities of cooling tower drift/mist.

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow	---	Report	1/quarter	LAC 33:IX.2707.I.1.b.
Oil & Grease	---	15 mg/l	1/quarter	BPJ, LDEQ Storm Water Guidance [1]
TOC	---	50 mg/l	1/quarter	BPJ, LDEQ Storm Water Guidance [1]
pH	6.0 s.u. (min)	9.0 s.u. (max)	1/quarter	BPJ, LDEQ Storm Water Guidance [1]

[1] LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6)

Outfall 006 - Clarifier underflow

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	*Daily Max*		
Flow	Report	Report	1/day	LAC 33:IX.2707.I.1.b.
Coagulants	---	---	---	See [1] below

(1) The quantity and types of all coagulants (clarifying agents) used in the intake raw river water treatment clarification system during the sampling month shall be recorded. Records of the quantity and type of coagulants used shall be retained for three (3) years following Part III.C.3. No DMR reporting shall be required.

C. MONITORING FREQUENCIES

All monitoring frequencies are based upon best professional judgement and are consistent with frequencies previously applied to other major steam electric generating facilities. Whole Effluent Toxicity testing frequency is based upon recommendations from the Municipal and General Water Permits Section (see Appendix A).

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS

In accordance with 40 CFR 122.44(d)(I), the potential discharge was evaluated to determine whether pollutants would be discharged "at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." The only pollutants with numeric water quality standards established in LAC 33:IX Chapter 11, as required under Section 303 of the Clean Water Act, and which may be present at this type of facility are metals.

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. Calculations, results, and documentation are given in Appendix B.

The following pollutants received water quality based effluent limits:

None

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. They are also listed in Part II of the permit.

E. BIOMONITORING REQUIREMENTS

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfall 001 are as follows:

TOXICITY TESTS	FREQUENCY [1]
NOEC, Pass/Fail [0/1], Lethality, Static Renewal, 48-Hour Acute, Pimephales promelas	1/year
NOEC, Value [%], Lethality, Static Renewal, 48-Hour Acute, Pimephales promelas	1/year
NOEC, Value [%] Coefficient of Variation, Static Renewal 48-Hour Acute, Pimephales promelas	1/year
NOEC, Pass/Fail [0/1], Lethality, Static Renewal 48-Hour Acute, Daphnia pulex	1/year
NOEC, Value [%], Lethality, Static Renewal 48-Hour Acute Daphnia pulex	1/year
NOEC, Value [%] Coefficient of Variation, Static Renewal 48-Hour Acute, Daphnia pulex	1/year

(1) The permittee must collect the 24-hour composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis. However, if no biofouling agent or chlorine is used during the monitoring period, the permittee must still conduct the required annual testing.

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring

frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to this Office. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. The additional effluent concentrations shall be 0.06%, 0.09%, 0.11%, 0.15%, and 0.2% effluent. The low-flow effluent concentration (critical dilution) is defined as 0.15% effluent.

IX. Compliance History/DMR Review:

A file review revealed that the River Bend Station was issued a Consolidated Compliance Order and Notice of Potential Penalty (WE-CN-03-1026) on May 26, 2004. According to the order, an inspection revealed that the permittee was not properly maintaining records. Specifically, the temperature logbook for the refrigerator thermometers was not being maintained. The order also identified several overflows of cooling towers and the sewer system and listed effluent limitation excursions dating back to 2001.

A Discharge Monitoring Report review was done for the period of January 2002 until February 2005. The following reported permit excursions were noted:

Date	Parameter	Outfall	Reported Value	Permit Limits
12/31/03	pH	001	3.44 s.u.	6.0 s.u. (Min)
12/31/03	Total Zinc	001	2.17 mg/l	1.0 mg/l (Daily/Mthly Avg)
9/30/03	TSS	003	227 mg/l	100 mg/l (Daily Max)

X. Endangered Species:

The receiving waterbody, Subsegment 070201 of the Mississippi River Basin has been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for the Pallid Sturgeon, which is listed as

a threatened or endangered species. This draft permit has been submitted to the FWS for review in accordance with a letter dated September 29, 2004 from Watson (FWS) to Gautreaux (LDEQ). As set forth in the Memorandum of Understanding between the LDEQ and the FWS, and after consultation with FWS, LDEQ has determined that the issuance of the LPDES permit is not likely to have an adverse effect upon the Pallid Sturgeon. Effluent limitations are established in the permit to ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. The more stringent of technology and water quality based limits (as applicable) have been applied to ensure maximum protection of the receiving water.

XI. Historic Sites:

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

XII. Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in the application.

XIII. Variances:

No requests for variances have been received by this Office.

XIV. Public Notices:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

A public notice will be published in a local newspaper of general circulation and in the Office of Environmental Services Public Notice Mailing List

XV. TMDL Waterbodies:

Segment 070201 is not listed on LDEQ's Final 2004 303(d) List, as impaired, and to date no TMDL's have been established. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by any future TMDL's.

XVI. 316(b) Requirements

The River Bend Power Station is existing electric generating facility that operates a cooling water intake structure on the Mississippi River. The intake structure has a design capacity of approximately 23 MGD. In preparing the renewal LPDES permit for the River Bend Station, this Office determined that in accordance with 40 CFR 125.91(a) and LAC 33:IX.4733, the facility is not regulated by the 316(b) Phase I or Phase II rule for cooling water intake structures because it is an existing facility that has a design intake capacity of less than 50 MGD.